

REMARKS

Claims 12-13, 24, 25 and 33-38 are now pending in the application. By this paper, Claims 12 and 24 have been amended. The basis for these amendments can be found throughout the specification, claims, and drawings originally filed. No new matter has been added. The preceding amendments and the following remarks are believed to be fully responsive to the outstanding Office Action and are believed to place the application in condition for allowance.

The Examiner is respectfully requested to reconsider and withdraw the rejections in view of the amendments and remarks contained herein.

REJECTION UNDER 35 U.S.C. § 102

Claims 12, 24, 34-36 and 38 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Schembri et al. (U.S. Pat. No. 6,518,056).

This rejection is respectfully traversed.

Claim 12 calls for a liquid jetting apparatus for jetting a liquid to be applied to a substrate includes a first droplet jet head disposed a first distance from a center of rotation of the substrate. The first droplet jet head includes a first nozzle train positioned at a first angular orientation relative to a radial direction of the substrate. A second droplet jet head is disposed a second distance from the center of rotation of the substrate and includes a second nozzle train positioned at a second angular orientation relative to the radial direction of the substrate and a third droplet jet head is disposed a third distance from the center of rotation of the substrate and includes a third nozzle train positioned at a third angular orientation relative to the radial direction of the

substrate. The second distance is greater than the first distance and the third distance is greater than the second distance. The first angular orientation is different than the second angular orientation and the third angular orientation is different than the second angular orientation. See Specification at pg. 33, Paragraph [0145], pg. 34, Paragraph [0146], and FIGS. 14(a) and 14(b).

Independent Claim 24 calls for a liquid jetting apparatus for jetting a liquid applied to a stationary or rotating substrate including a first droplet jet head having at least one nozzle, and a spin coater for rotating the substrate. See Specification at pg. 33, Paragraph [0145] and FIGS. 14(a) and 14(b). Furthermore, independent Claim 24 recites that the first droplet jet head is positioned at a first angular orientation relative to a radial direction of the substrate, the second droplet jet head is positioned at a second angular orientation relative to the radial direction of the substrate, and the third droplet jet head is positioned at a third angular orientation relative to the radial direction of the substrate. See Specification at pg. 34, Paragraph [0146] and FIGS. 14(a) and 14(b). The first angular orientation, second angular orientation, and third angular orientation are varied in accordance with a distance from a center of rotation of the substrate. See Specification at pg. 33, Paragraph [0145] and FIGS. 14(a) and 14(b).

In this manner, the claimed invention is directed toward a plurality of droplet jet heads (22), each positioned at a different angular orientation (t_1 , t_2 , t_3) relative to a radial direction of a substrate (26). See Specification at pg. 33, Paragraph [0145] and FIGS. 14(a) and 14(b). The angular orientation of each of the droplet jet heads is varied in accordance with a distance from a center of rotation of the substrate to reduce

variance in application of liquid to the substrate. See Specification at pg. 34, Paragraph [0146] and FIGS. 14(a) and 14(b). Schembri fails to teach such a relationship.

More particularly, Schembri fails to teach varying an angle of a nozzle train in accordance with the distance the nozzle train is positioned from a center of rotation of a substrate. Schembri teaches first, second, and third inkjet heads (27b), each having a plurality of nozzles (27c) that form a nozzle train. See Schembri at FIG. 2C. Each nozzle provides monomer to a location in an annular pattern on a surface of a substrate (11). See Schembri at Col. 14, Ins. 15-19 and FIGS. 1A and 2C. One nozzle exists for each concentric ring (15) of the annular pattern with each inkjet head located at an appropriate radius of the respective annular ring. See Schembri at Col. 14, Ins. 20-23. Schembri teaches that four inkjet heads have “their series of nozzles aligned with the same concentric rings.” See Schembri at Col. 14, Ins. 23-17.

The inkjet heads of Schembri are located at different radial positions around a center of rotation of a substrate, but are not positioned at different angles relative to a radial direction of a substrate. Furthermore, the angular position of Schembri’s ink jet heads is not varied in accordance with a distance from a center of rotation of a substrate. Rather, Schembri teaches that the inkjet heads cooperate to form concentric rings around a center of rotation of a substrate (See FIG. 1A of Schembri) and that that respective nozzles of each inkjet head are aligned such that cooperation between each nozzle forms a concentric ring. If the inkjet heads were positioned at different angles relative to a radial direction of a substrate, the concentric pattern shown in FIG. 1A of Schembri could not be attained as described at Col. 14, lines 15-29.

Because Schembri fails to teach varying an angle of a nozzle train in accordance with the distance the nozzle train is positioned from a center of rotation of a substrate, Applicant respectfully submits that Schembri fails to teach each and every element of the present invention. Accordingly, Applicant respectfully submits that independent Claims 12 and 24, as well as Claims 34-36 and 38, respectively dependent therefrom, are in condition for allowance. Therefore, reconsideration and withdrawal of the rejection is respectfully requested.

REJECTION UNDER 35 U.S.C. § 103

Claims 13, 25, 33 and 37 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Schembri et al. (U.S. Pat. No. 6,518,056) in view of Shimoda (U.S. Pat. No. 5,831,645) JP10-166574.

This rejection is respectfully traversed.

Independent Claims 12 and 24 are believed to be in condition for allowance in light of the remarks contained above. Because Claims 13, 25, 33, and 37 respectively depend from independent Claims 12 and 24, dependant Claims 13, 25, 33, and 37 should similarly be in a condition for allowance for at least the same reasons. Therefore, reconsideration and withdrawal of the rejection is respectfully requested.

CONCLUSION

It is believed that all of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicant therefore respectfully requests that the Examiner reconsider and withdraw all presently outstanding rejections. It is

believed that a full and complete response has been made to the outstanding Office Action, and as such, the present application is in condition for allowance. Thus, prompt and favorable consideration of this amendment is respectfully requested. If the Examiner believes that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at (248) 641-1600.

Respectfully submitted,

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